

C-3.5 Illustrate the structural formulas and names of simple hydrocarbons (including alkanes and their isomers and benzene rings).

Revised Taxonomy Level 2.2-B Exemplify (illustrate) conceptual knowledge

Students did not cover this standard in physical science

It is essential for students to

- ❖ Understand International Union of Pure and Applied Chemistry (IUPAC) organic nomenclature
- ❖ Name and write the formula for alkanes (up to 10-carbon), their isomers and benzene rings
- ❖ Draw the structural formulas for alkanes up to a 10-carbon chain

Assessment

The verb exemplify (illustrate) means to find a specific example or illustration of a concept or principle, therefore the major focus of assessment will be for students to give examples that show that they understand the organic nomenclature for organic alkanes and their isomers. Conceptual knowledge requires that students understand the interrelationships among the basic elements within a larger structure that enable them to function together, in this case, that students understand how the structure of the molecule determines its name.